

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions or listings of claims in the present application.

1. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the ~~at least one~~ grafted rubbers A) and B) are prepared separately.

2. (Previously presented) The composition of Claim 1 wherein said at least vinyl monomer of said A) comprise styrene and acrylonitrile in a weight ratio of 90:10 to 50:50 therebetween, wherein optionally at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.

3. (Original) The composition of Claim 2 wherein at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.
4. (Previously presented) The composition of Claim 1 wherein said at least vinyl monomer of said B) comprise styrene and acrylonitrile in a weight ratio of 90:10 to 50:50 therebetween, wherein optionally at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.
5. (Original) The composition of Claim 4 wherein at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.
6. (Original) The composition of Claim 1 wherein said redox system contains at least one oxidizing agent selected from the group consisting of di-tert.-butyl peroxide, cumene hydroperoxide, dicyclohexyl percarbonate, tert.-butyl hydroperoxide, p-menthane peroxide, H_2O_2 , and at least one reducing agent selected from the group consisting of salts of sulfinic acid, salts of sulfurous acid, sodium dithionite, sodium sulfite, sodium hyposulfite, sodium hydrogen sulfite, ascorbic acid and its salts, sodium formaldehyde sulfoxylate, mono- and dihydroxyacetone, sugars, glucose, dextrose, iron(II) salts, tin(II) salts and titanium(II) salts .
7. (Original) The composition of Claim 1 wherein A) is present in an amount of 20 to 90 % and B) is present in an amount of 10 to 80 % , said percents, both occurrences, being relative to the total weight of A, B and C.
8. (Original) The composition of Claim 1 wherein A) is present in an amount of 30 to 80 % and B) is present in an amount of 20 to 70 % , said percents, both occurrences, being relative to the total weight of A, B and C.

9. (Original) The composition of Claim 1 wherein C is present in an amount of 50 to 2000 parts by weight per 100 parts by weight of the total weight of A + B.
10. (Original) The composition of Claim 1 wherein C is present in an amount of 100 to 1500 parts by weight per 100 parts by weight of the total weight of A + B.
11. (Cancelled)
12. (Previously presented) The composition of Claim 1 wherein each of the rubber latices of said A and of said B conform to monomodal distributions of particle sizes.
13. (Previously presented) The composition of Claim 1 wherein each of the rubber latices of said A and of said B conform to bimodal distributions of particle sizes.
14. - 17. (Cancelled)
18. (Original) The composition of Claim 1 wherein rubber latices of said A and of said B have average particles diameters (d_{50}) of 50 to 600 nm.
19. (Original) The composition of Claim 18 wherein (d_{50}) is 100 to 500 nm.
20. (Original) The composition of Claim 1 wherein average particle diameter (d_{50}) of the rubber latex of A is smaller than the average particle diameter (d_{50}) of the rubber latex of B.
21. (Original) A method of using the composition of Claim 1 comprising producing a molded article.
22. (Previously presented) The moldings produced by the method of Claim 1.

23. (Currently amended) A process for the production of thermoplastic molding compositions comprising mixing at an elevated temperature

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the ~~at least one~~ grafted rubbers A) and B) are prepared separately.

24. (Previously presented) The composition of Claim 1 wherein at least one resin-forming vinyl monomer of said C) is styrene and acrylonitrile in a weight ratio of 90:10 to 50:50 therebetween, wherein optionally at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.

25. (Cancelled)

26. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C and conforming to a monomodal particle size distribution, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C and conforming to a trimodal particle size distribution, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the ~~at least one~~ grafted rubbers A) and B) are prepared separately.

27. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C and conforming to a bimodal particle size distribution, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C and conforming to a trimodal particle size distribution, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the grafted rubber A) and B) are prepared separately.

28. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of butadiene latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of butadiene latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the ~~at least one~~ grafted rubbers A) and B) are prepared separately.

29. (Previously presented) The composition of Claim 28 wherein said at least vinyl monomer of said A) comprise styrene and acrylonitrile in a weight ratio of 90:10 to 50:50 therebetween, wherein optionally at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.

30. (Previously presented) The composition of Claim 28 wherein said at least vinyl monomer of said B) comprise styrene and acrylonitrile in a weight ratio of 90:10 to 50:50 therebetween wherein optionally at least one of said styrene and acrylonitrile is at least partly replaced by at least one member selected from the group consisting of α -methylstyrene, methyl methacrylate and N-phenylmaleimide.

31. (Previously presented) The composition of Claim 28 wherein A) is present in an amount of 20 to 90 % and B) is present in an amount of 10 to 80 % , said percents, both occurrences, being relative to the total weight of A, B and C.

32. (Previously presented) The composition of Claim 28 wherein C is present in an amount of 50 to 2000 parts by weight per 100 parts by weight of the total weight of A + B.

33. (Previously presented) The composition of Claim 28 wherein the rubber latices of said A and of said B conform to monomodal distributions of particle sizes.

34. (Previously presented) The composition of Claim 28 wherein the rubber latices of said A and of said B conform to bimodal distributions of particle sizes.

35. (Previously presented) The composition of Claim 28 wherein the rubber latex of said A conforms to a monomodal particle size distribution and the rubber latex of said B conforms to a bimodal particle size distribution.

36. (Previously presented) The composition of Claim 28 wherein the rubber latex of said A conforms to a monomodal particle size distribution and the rubber latex of said B conforms to a trimodal particle size distribution.

37. (Previously presented) The composition of Claim 28 wherein the rubber latex of said A conforms to a bimodal particle size distribution and the rubber latex of said B conforms to a trimodal particle size distribution.

38. (Previously presented) The composition of Claim 28 wherein the rubber latex of said A conforms to a bimodal particle size distribution and the rubber latex of said B conforms to a monomodal particle size distribution.

39. (Previously presented) The composition of Claim 28 wherein rubber latices of said A and of said B have average particles diameters (d_{50}) of 50 to 600 nm.

40. (Previously presented) The composition of Claim 39 wherein (d_{50}) is 100 to 500 nm.

41. (Previously presented) The composition of Claim 28 wherein average particle diameter (d_{50}) of the rubber latex of A is smaller than the average particle diameter (d_{50}) of the rubber latex of B.

42. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system,

C) as an optional component at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer, and further comprising at least one resin selected from the group consisting of aromatic polycarbonate, aromatic polyestercarbonate, polyester and polyamide,

wherein the at least one grafted rubbers A) and B) are prepared separately.

43. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex conforming to a monomodal particle size distribution, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex conforming to a bimodal particle size distribution, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer,

wherein the grafted rubbers A) and B) are prepared separately.

44. (Currently amended) A thermoplastic molding composition comprising

A) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerised in the presence of at least one rubber a) that is present in the form of a latex conforming to a bimodal particle size distribution, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one compound selected from the group consisting of ammonium peroxodisulfate, potassium peroxodisulfate and sodium peroxodisulfate,

B) at least one grafted rubber that is a product of free-radical emulsion polymerisation wherein at least one vinyl monomer is polymerized in the presence of at least one rubber b) that is present in the form of a latex conforming to a monomodal particle size distribution, said rubber having a glass transition temperature lower than 0°C, the polymerization being initiated by at least one redox system, and optionally

C) at least one thermoplastic, rubber-free polymer that is the product of the polymerisation of at least one resin-forming vinyl monomer.

wherein the grafted rubbers A) and B) are prepared separately.